

ILLINOIS DOT Traffic Monitoring

By Rob Robinson
Office of Planning & Programming
Illinois DOT

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M.P.H.



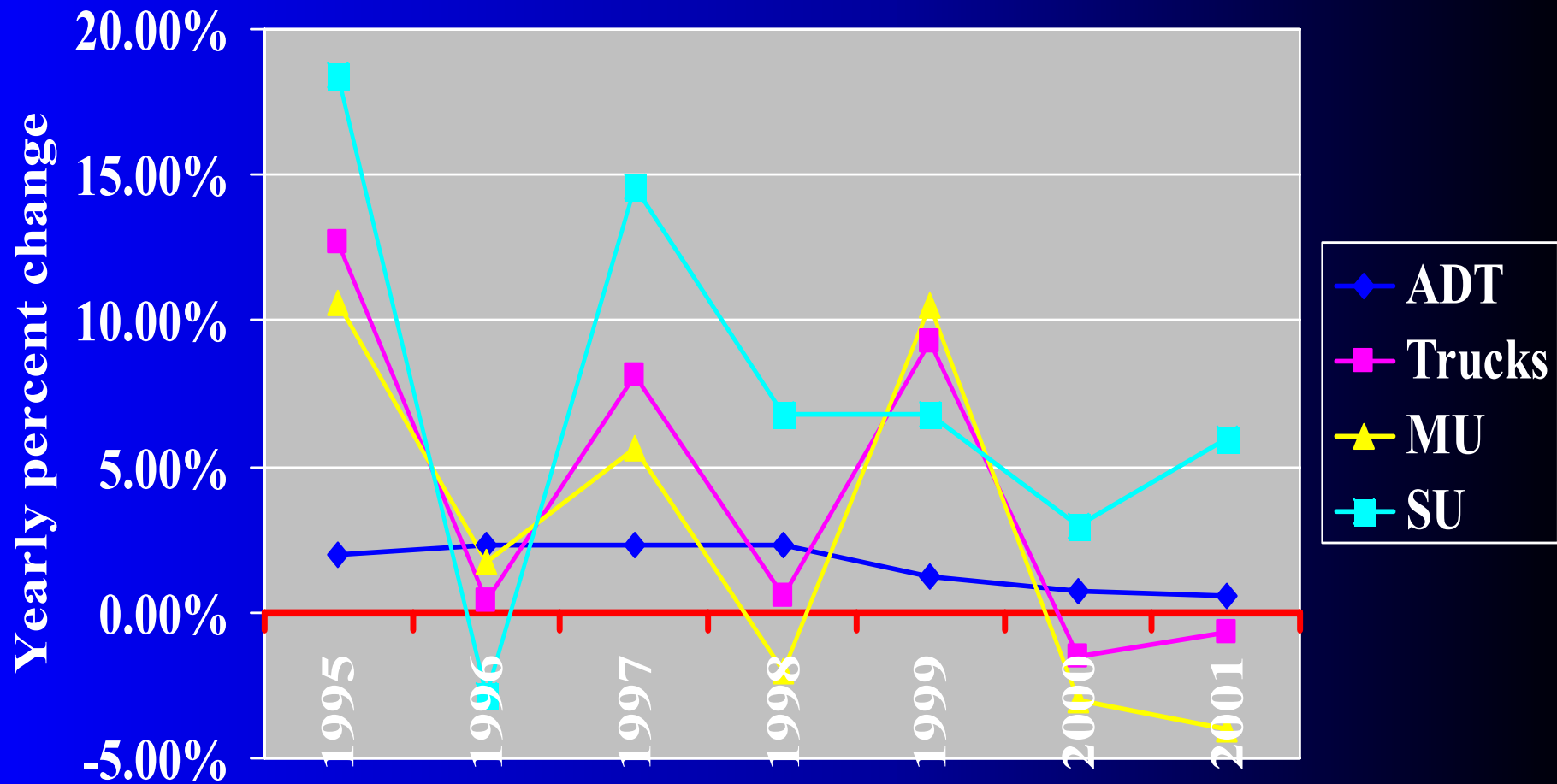
Topics

- Vehicle Length - why we changed our classification scheme
- Relationship between Axle classification and Length classification
- Results from our Vehicle Length program
- Comments on data requirements from 2002 Pavement Design Guide

Previous Truck Classification

- FHWA recommended 100 HPMS locations
- 13 vehicle classification categories
- Road tubes and manual counts
- 3 year cycle

Truck VMT Changes



Search for New Portable Equipment

- Safety of the worker
- Quality and Quantity of data collected
- Cost to the Department
- Comply with new FHWA's Traffic Monitoring Guide (TMG)

Nu-Metrics Hi-Star 97



Nu-Metrics Hi-Star 97

- 8 adjustable bins for Length, and 15 for Speed
- No additional installation work for classification or speed
- Product Specs $\pm 8\%$ @ 95% probability

IDOT Testing

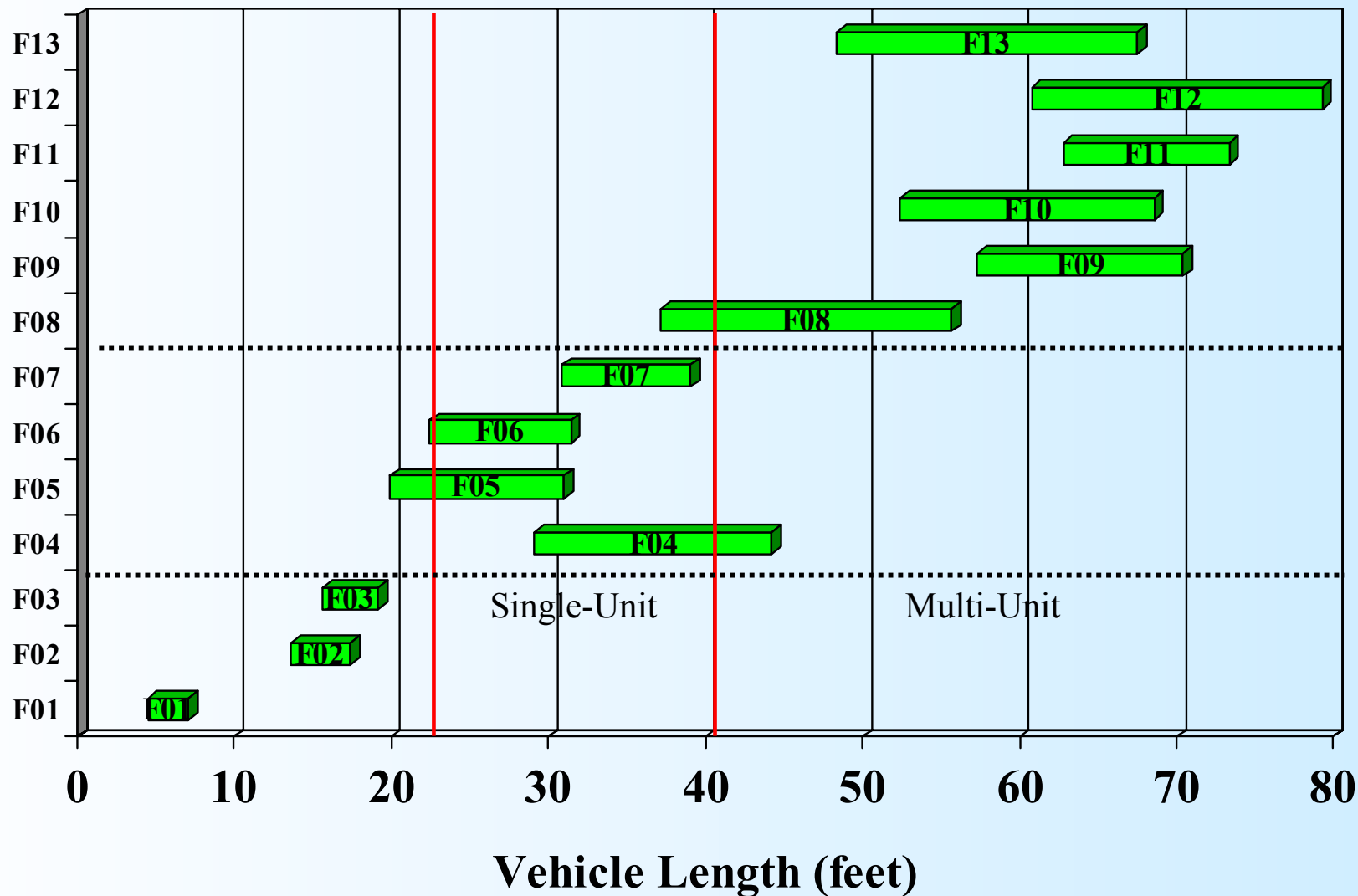
- 20-30 Hi-Stars at one location
- Manual counts vs Hi-Stars
- Tube classification vs Hi-Stars
- Pre-measured vehicles repeatedly driving over Hi-Stars

Three Major Issues

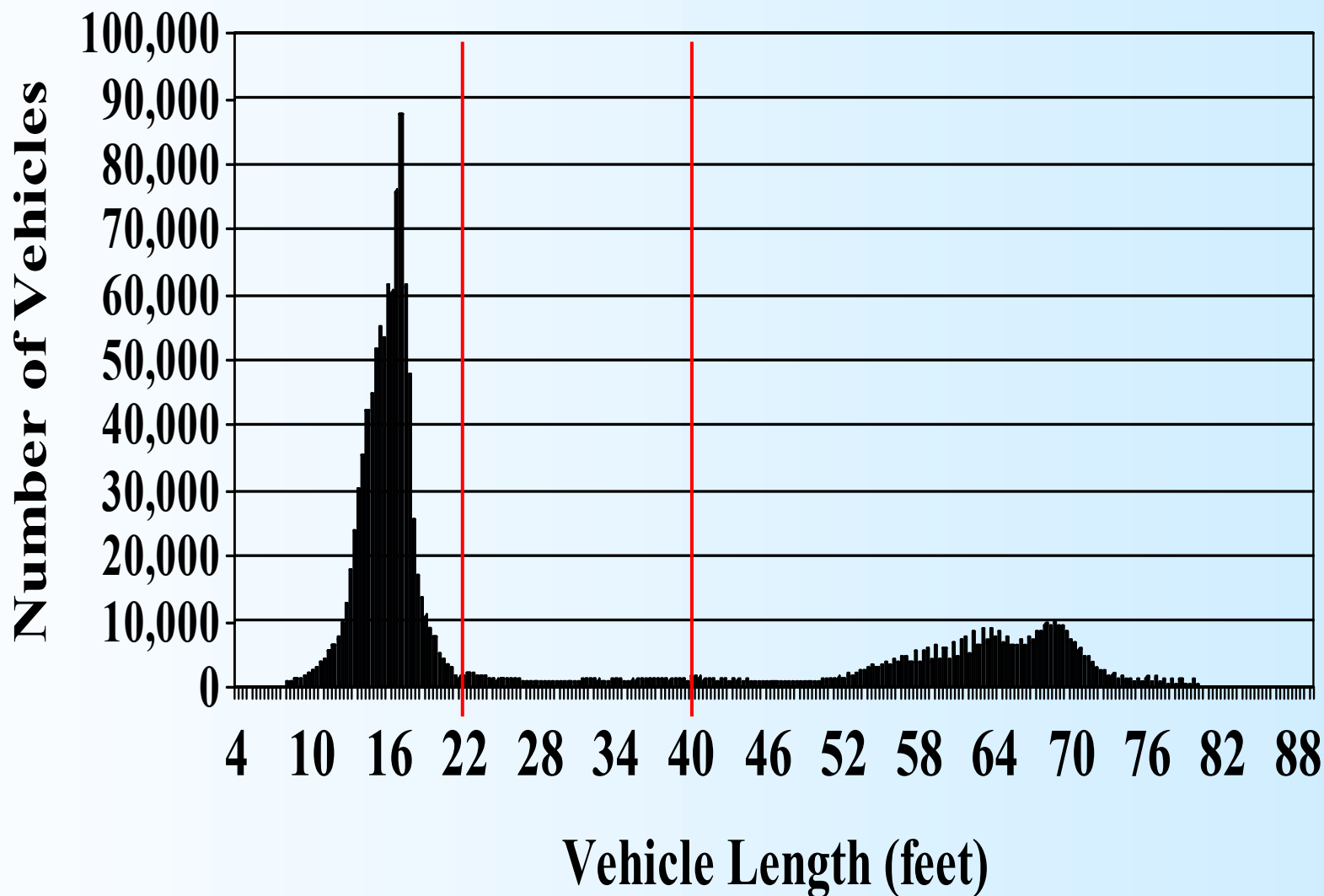
- Would the portable equipment measure length correctly
- How to go from length to axle classification
- Conform to new TMG and get FHWA signoff on changes in methodology

Axle Classification vs. Length Classification

(data from permanent ATR locations)



Distribution of Vehicles by Length



Results

- Public attention to new equipment

How odd black bumps in road count traffic

BY DAVE ORRICK

Daily Herald Staff Writer

Some roads...

curate picture of state roads ever.

The technology has been around for about a decade, but in the last two

many cars and how many semis is that?" he said. "We had to make some assumptions (with the road tech)

software for that."

Here's how they work:

Black squares in road count cars, help time traffic signals

Can you tell us what those black "squares" are that I see in the middle of the road? They're about 12 inches

Traffic O&A

slim uses counters to help determine if traffic signal timing is an



IDOT explains new traffic-counting device

Q: What are the rectangular rubber



installation...

of the road.



AT THE

Traffic: Earth's magnetic field is used to count vehicles

IDOT increasing use of high-tech road monitors

By BEN KIECKHEFER

STATE CAPITOL BUREAU

Over the past three years, the Illinois Department of Transportation has spent

Results

- Year 2000 – collected 3,500 classification counts
- Year 2001 – collecting 6,000 classification counts
- FHWA approved length based process
- Full coverages of Interstates, US and IL routes (PV,SU,MU)
- Stopped collecting 100 HPMS 13-category counts
- Buses are factored out of SU using historical HPMS data
- Publish and report 4 categories

HPMS submittal requirements

Highway Performance Monitoring System

File Editors View Analysis Tools Help

2001 Illinois English

Summary

Pavement Type Travel Activity Length Totals Travel Totals Urbanized Length Totals Urbanized Travel Totals

a decimal to the nearest thousandth.

	Motorcycle	Passenger Cars	Light Trucks	Busses	Single-Unit Trucks	Combination Trucks
R	0.000	0.000	0.000	0.000	0.000	0.000
U	0.000	0.000	0.000	0.000	0.000	0.000
R	0.000	0.000	0.000	0.000	0.000	0.000
A	0.000	0.000	0.000	0.000	0.000	0.000
L	0.000	0.000	0.000	0.000	0.000	0.000
=	0.000	0.000	0.000	0.000	0.000	0.000
U	0.000	0.000	0.000	0.000	0.000	0.000
R	0.000	0.000	0.000	0.000	0.000	0.000
B	0.000	0.000	0.000	0.000	0.000	0.000
A	0.000	0.000	0.000	0.000	0.000	0.000
N	0.000	0.000	0.000	0.000	0.000	0.000

Calculate Print Save Help

2002 Pavement Design Guide

- Value of additional data collection efforts for the State
- Cost of additional data - build and maintain new WIM sites
- How extensively is WIM data used now
- States need flexible

www.dot.state.il.us





Illinois Department of Transportation

Annual Average Daily Traffic

Go to area...

Statewide



Illinois Counties

None



Illinois Cities

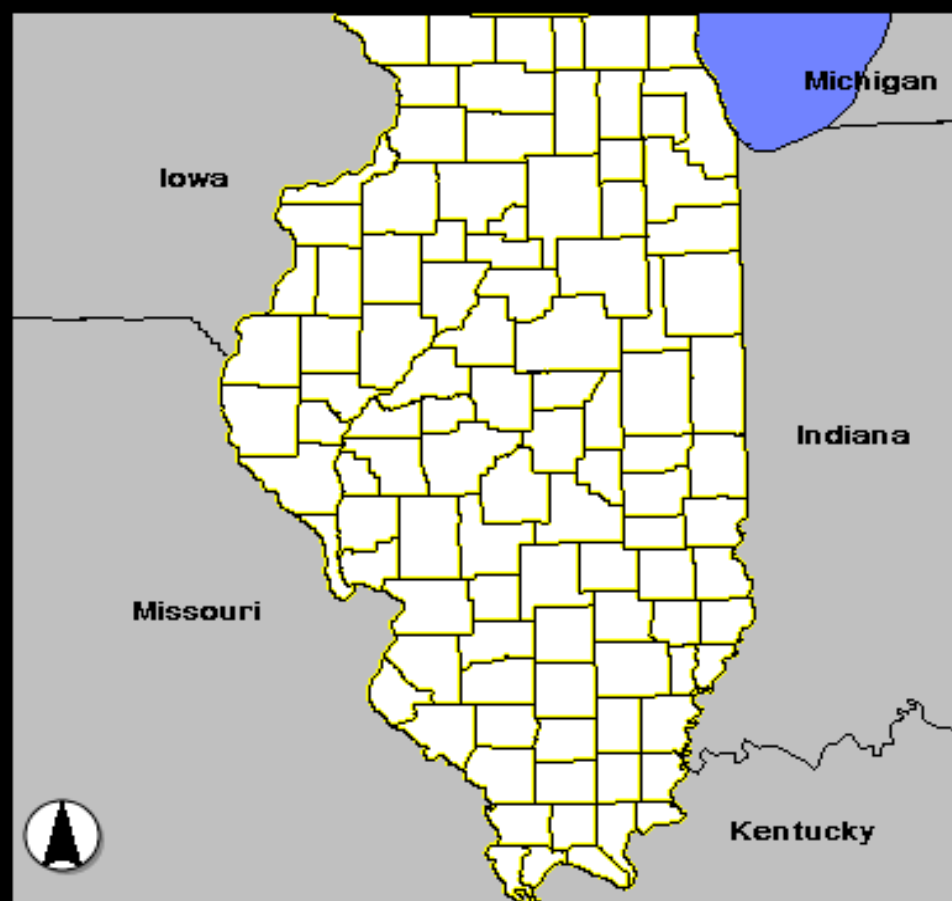
None



Legend

- Selected Features
- Marked Routes**
 - US Routes
 - Illinois Routes
 - Interstates
- 1200 Daily Traffic Counts
- Cities
- County Boundaries

Average Daily Traffic



Note: To view additional values on the map, please zoom in.

Tools

- Zoom In
- Zoom Out
- Identify
- Pan
- Print Preview
- Truck Traffic
- More Roads
- View Road Names
- Help
- Close Window

Department of Transportation

Daily Traffic

Total Traffic

DAILY TRAFFIC	35900
YEAR OF COUNT	1999
MARKED ROUTE	IL 38
ROAD NAME	ROOSEVELT RD
COUNTY	DuPage

Truck Traffic

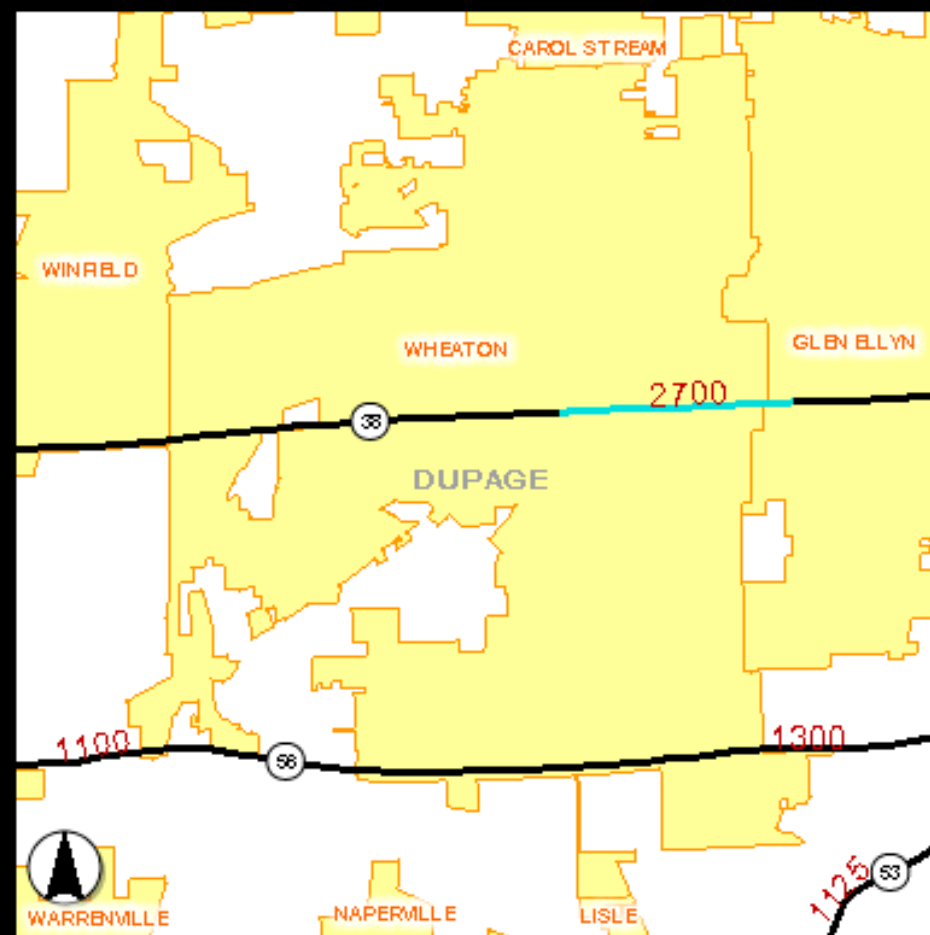
DAILY TRUCK TRAFFIC	2700
YEAR OF TRUCK COUNT	2000
MULTI-UNIT COUNT	850
SINGLE-UNIT COUNT	1850

Close

Marked Routes




-  US Routes
-  Illinois Routes
-  Interstates
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-  County Boundaries

Average Daily Truck Traffic



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Questions ?